

REMARKS

In the Final Office Action, the drawings stand objected to as not showing every feature of the claimed invention. Further, claims 2-6, 8, 10-15, 17-24, and 26-27 stand rejected under 35 U.S.C. 102(b), as being anticipated by Jansen et al. (U.S. Patent No. 5,585,709). Further, claims 7 and 25 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen et al. in view of Boyer (U.S. Patent No. 4,485,796). Finally, the Examiner states that the Applicants' arguments on March 14, 2002 have been considered but are not persuasive.

Regarding the Examiner's objection to the drawings, Applicants have cancelled without prejudice the claims having the buried permanent magnet, here claims 15, 24 and 27. Reconsideration of the drawings in light of these changes is respectfully requested.

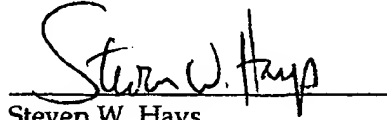
Regarding the Examiner's rejection of claims 2-6, 8, 10-14, 17-23, and 26 under 35 U.S.C. 102(b), as being anticipated by Jansen et al. Applicants have amended independent claims 2, 3, 10, 11, 17, and 18 to further include a plurality of rotor bars and to further include the limitation "wherein at least one of the sensing slots is not centered to a corresponding one of said plurality of rotor bars." Support for these changes is shown in Figures 1-8 of the originally filed drawings and as such do not constitute new matter. It is also respectfully submitted that these changes overcome the Jansen reference, as Jansen requires that each of the sensing slots be centered to a rotor bar to create its desired saliency. Reconsideration of 2-6, 8, 10-14, 17-23, and 26 is respectfully requested.

In view of the foregoing amendments and remarks, the Applicants submit that claims 2-6, 8, 10-14, 17-23, and 26 are all in proper form and patentably distinguish from the prior art. Accordingly, allowance of the claim and passage of the application to issuance is respectfully requested.

The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 223-9500 if any matters remain unresolved.

Respectfully submitted,

ARTZ & ARTZ, P.C.

A handwritten signature in cursive script, reading "Steven W. Hays", is written over a horizontal line.

Steven W. Hays

Reg. No. 41,823

28333 Telegraph Road, Suite 250

Southfield, MI 48034

(248) 223-9500

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Claims:

Please cancel claims 15, 24 and 27 without prejudice.

Please amend claims 2, 3, 10, 11, 17, and 18 to read as follows:

2. (Twice Amended) A method for modifying an electric machine drive rotor having a stator to create rotor-position-dependent saliency and allow sensorless control, the method comprising:

providing a plurality of rotor bars uniformly spaced around the rotor; and

providing a plurality of sensing slots uniformly spaced around the rotor; wherein at least one of said plurality of sensing slots is not centered to a corresponding one of said plurality of rotor bars positioned around the rotor.

3. (Twice Amended) A method for modifying an electric machine drive rotor having a stator to create rotor-position-dependent saliency and allow sensorless control, the method comprising:

providing a plurality of rotor bars uniformly spaced around the rotor; and

providing a plurality of sensing slots variably spaced in a repeating manner around the rotor, wherein the distance between an adjacent pair of said plurality of sensing slots is variably spaced with respect to the distance between a next adjacent pair of said plurality of sensing slots and wherein at least one of said plurality of sensing slots is not centered to a corresponding one of said plurality of rotor bars positioned around the rotor.

10. (Twice Amended) A sensorless control electric machine drive comprising:

a stator having a plurality of stator slots; and

a rotor having a plurality of rotor sensing slots located along its outer periphery, said rotor also having a plurality of rotor bars, wherein said plurality of rotor sensing slots are coupled to said plurality of stator slots and wherein said plurality of rotor sensing slots are spaced uniformly around the outer periphery of said rotor and wherein at least one of said plurality of rotor sensing slots is not centered to a corresponding one of said plurality of rotor bars positioned around the rotor.

11. (Twice Amended) A sensorless control electric machine drive comprising:

a stator having a plurality of stator slots; and

a rotor having a plurality of rotor sensing slots located along its outer periphery, said rotor also having a plurality of rotor bars, wherein said plurality of rotor sensing slots are coupled to said plurality of stator slots and wherein said plurality of rotor sensing slots are variably spaced in a repeating pattern around the outer periphery of said rotor, wherein the distance between an adjacent pair of said plurality of sensing slots is variably spaced with respect to the distance between a next adjacent pair of said plurality of sensing slots and wherein at least one of said plurality of rotor sensing slots is not centered to a corresponding one of said plurality of rotor bars positioned around the rotor.

17. (Twice Amended) A sensorless control electric machine drive comprising:

a stator having a plurality of stator slots; and

a rotor having a plurality of rotor sensing slots located along its outer periphery, said rotor also having a plurality of rotor bars, wherein said plurality of rotor sensing slots are spaced uniformly around the outer periphery of said rotor and wherein at least one of said plurality of rotor sensing slots is not centered to a corresponding one of said plurality of rotor bars positioned around the rotor.

18. (Twice Amended) A sensorless control electric machine drive comprising:

a stator having a plurality of stator slots; and

a rotor having a plurality of rotor sensing slots located along its outer periphery, said rotor also having a plurality of rotor bars, wherein said plurality of rotor sensing slots are variably spaced in a repeating pattern around the outer periphery of said rotor, wherein the distance between an adjacent pair of said plurality of sensing slots is variably spaced with respect to the distance between a next adjacent pair of said plurality of sensing slots and wherein at least one of said plurality of rotor sensing slots is not centered to a corresponding one of said plurality of rotor bars positioned around the rotor.